

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-49 (Cancelled)

50. (Currently amended) Burr-examination sensor device for the examination of burrs on a workpiece, comprising:

at least one distance sensor with a detector head, ~~wherein the detector head is~~
positionable ~~at a distance~~ proximate to the workpiece; and

said detector head and workpiece ~~are being~~ movable relative to one another; ~~and wherein~~
the

said detector head ~~is couplable~~ having an active surface that is electromagnetically
couplable to the workpiece via at least one of inductance and capacitance, for determining or the
~~workpiece is adapted to be acted upon by it with an electromagnetic signal and the coupling to~~
~~the workpiece or an electromagnetic reaction signal of the workpiece to the impinging signal are~~
~~dependent on a distance between the detector head and the workpiece so that this distance is~~
~~determinable without any contact and by scanning a workpiece surface is adapted to be scanned~~
~~by with the active surface of the detector head in order to detect variations in at least one of~~
inductance and capacitance indicative of burrs without any contact between said surfaces.

51. (Cancelled)

52. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein
detector head and workpiece are movable relative to one another parallel to a distance direction.

53. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein
detector head and workpiece are movable relative to one another transversely to a vertical
distance direction.

54. (Previously presented) Sensor device for burr examination as defined in claim 50, comprising a positioning device for the positioning and movement of the detector head relative to the workpiece.
55. (Previously presented) Sensor device for burr examination as defined in claim 54, wherein the detector head is positionable by the positioning device along linearly independent coordinate directions.
56. (Previously presented) Sensor device for burr examination as defined in claim 54, wherein the detector head is rotatable relative to the workpiece.
57. (Previously presented) Sensor device for burr examination as defined in claim 54, wherein a positioning device for a tool for the machining of the workpiece is used as a positioning device for a distance sensor.
58. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein the detector head is designed as a probe or arranged in a probe.
59. (Currently amended) Sensor device for burr examination as defined in claim 58, wherein the probe is insertable into a bore in the workpiece in order to detect burrs in the bore.
60. (Previously presented) Sensor device for burr examination as defined in claim 58, wherein electronic components of the device are arranged entirely or partially in the probe.
61. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a visual range of the distance sensor is adjusted.
62. (Previously presented) Sensor device for burr examination as defined in claim 61, wherein a visual range of the distance sensor is adjustable electromagnetically.

63. (Previously presented) Sensor device for burr examination as defined in claim 61, wherein the distance sensor is designed and/or screened in such a manner that the electromagnetic coupling between detector head and workpiece is restricted to a specific visual range.

64. (Previously presented) Sensor device for burr examination as defined in claim 61, wherein the specific visual range comprises a viewing direction essentially transverse to a longitudinal direction of a distance sensor.

65. (Previously presented) Sensor device for burr examination as defined in claim 61, wherein the specific visual range comprises a viewing direction essentially parallel to a longitudinal direction of a distance sensor.

66. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a preliminary signal processing takes place in a measuring head and an evaluation unit for the burr examination is provided.

67. (Previously presented) Sensor device for burr examination as defined in claim 66, wherein an evaluation algorithm compares a measurement signal with a reference curve.

68. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein the detector head is provided with contacts so that it is connectable to a device arranged at a distance.

69. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein the detector head is designed as a remote unit couplable cordlessly to a device arranged at a distance.

70. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a distance sensor is an inductive sensor, the detector head being coupled inductively to a metallic workpiece with said sensor.

71. (Previously presented) Sensor device for burr examination as defined in claim 70, wherein the distance sensor has a metallic outer surface area acted upon with a voltage.

72. (Cancelled)

73. (Cancelled)

74. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a distance sensor is an ortho-inductive distance sensor, the detector head being coupled inductively to a metallic workpiece and the workpiece being acted upon by the detector head with an optical signal and a reflection signal being registerable by the detector head with said distance sensor.

75. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a distance sensor is a capacitive distance sensor, the detector head being coupled capacitively to the workpiece with said distance sensor.

76. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein the distance sensor is a coupled inductive-capacitive distance sensor, an element couplable to the workpiece not only inductively but also capacitively being provided with said distance sensor.

77. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a plurality of distance sensors is provided.

78. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein sensor signals of different distance sensors are linked to one another.

79. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein a difference signal of distance sensors is evaluated.

80. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein a cumulative signal of distance sensors is evaluated.

81. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein distance sensors of the sensor device for burr examination have the same viewing direction.

82. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein distance sensors of the sensor device for burr examination have different viewing directions.

83. (Previously presented) Sensor device for burr examination as defined in claim 82, wherein distance sensors of the sensor device for burr examination have viewing directions in opposite directions.

84. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein the distance sensors are fixed in position relative to one another.

85. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein the relative position of the distance sensors of the sensor device for burr examination is adjustable.

86. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein distance sensors have the same viewing plane.

87. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein distance sensors have offset viewing planes.

88. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein two distance sensors are provided.

89. (Previously presented) Sensor device for burr examination as defined in claim 77, wherein three distance sensors are provided.

90. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein the sensor device for burr examination is adapted to the workpiece to be examined with respect to configuration of screening and/or viewing direction and/or operating frequency and/or a free zone.

91. (Previously presented) Sensor device for burr examination as defined in claim 50, wherein a distance sensor is moved over a workpiece in a controlled and/or regulated manner in order to scan it.

92. (Previously presented) Sensor device for burr examination as defined in claim 91, wherein a distance to the workpiece determined by the distance sensor is a controlled variable.

93. (Currently amended) Use of a distance sensor for examining burrs in a bore of a workpiece, said sensor operating using at least one of electrical inductance and capacitance without ~~any contact~~ contacting the workpiece and being positionable ~~locally on a~~ adjacent the workpiece and able to interact with it ~~locally the workpiece in close proximity thereto~~, wherein a distance between the workpiece and the distance sensor indicative of the presence or absence of a burr is determinable from the interaction, ~~as burr examination sensor~~.

94. (Cancelled)

95. (Previously presented) Use of a distance sensor as defined in claim 93, wherein the distance sensor is coupled to the workpiece capacitively.

96. (Previously presented) Use of a distance sensor as defined in claim 93, wherein the distance sensor is coupled to the workpiece inductively.

97. (Cancelled)

98. (Previously presented) Use of a distance sensor as defined in claim 93, wherein a local sensor field is adapted to be formed between the distance sensor and the workpiece, a distance between distance sensor and workpiece being determinable via said field.